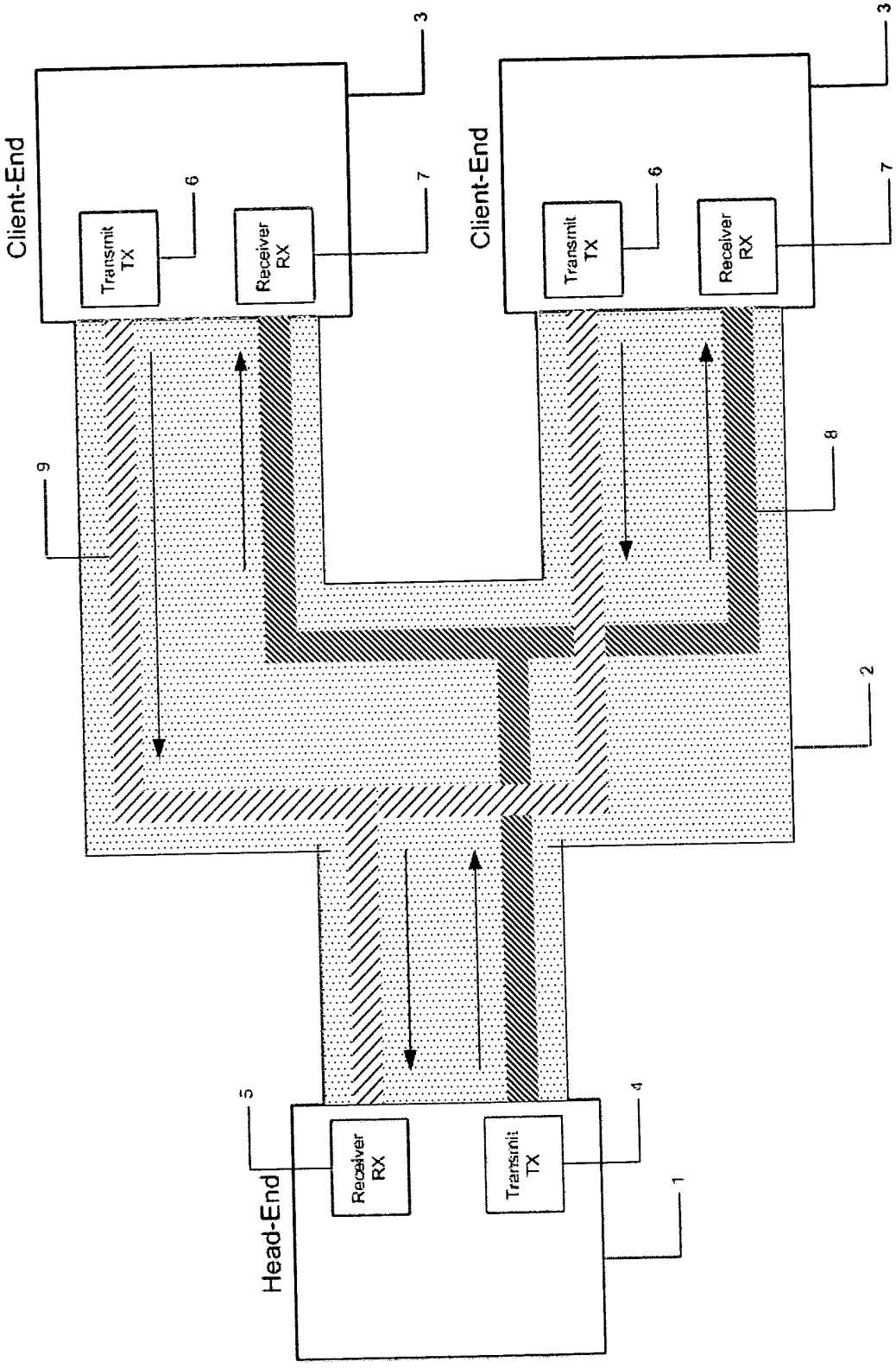
Client-End
Transmit TX
Receiver RX
6
7
3
Client-End
Transmit TX
Receiver RX
6
7
3
9
8
2
5
4
Head-End
Receiver RX
Transmit TX
1

Figure 1

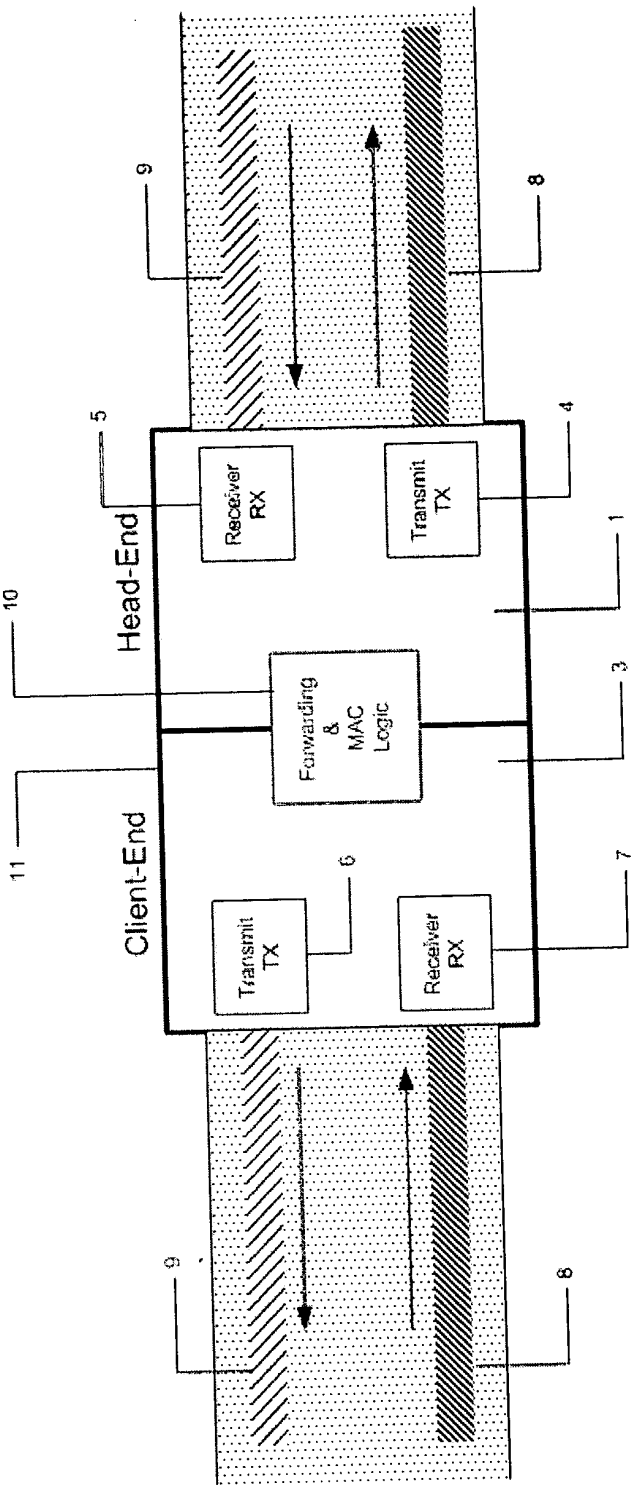
Head-End
Client-End
Receiver RX
Transmit TX
Forwarding & MAC Logic
Transmit TX
Receiver RX
1
3
4
5
6
7
8
9
10
11

Figure 2

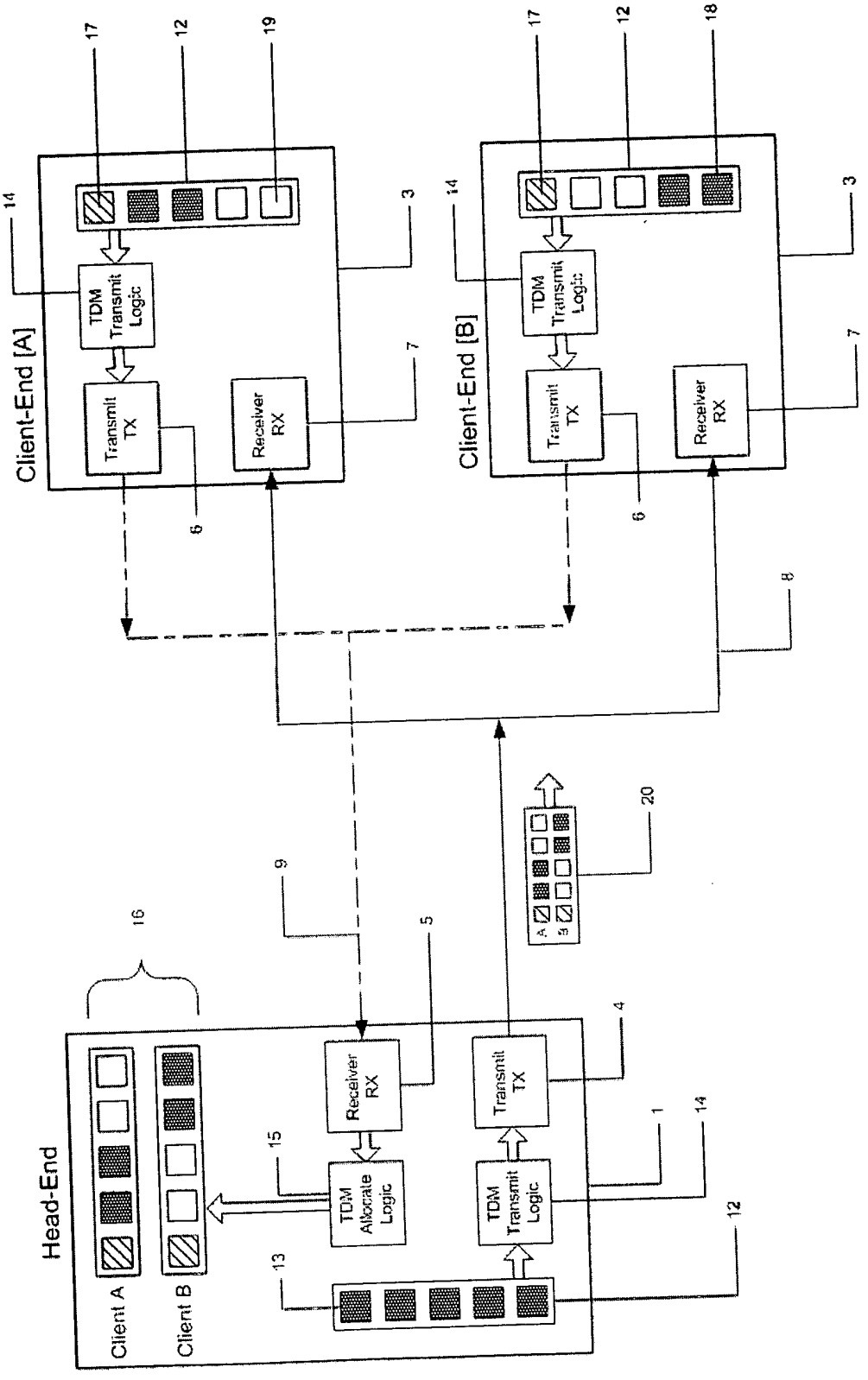
Client-End [A]
Client-End [B]
Head-End
TDM Transmit Logic
Transmit TX
Receiver RX
TDM Allocate Logic
Client A
Client B
A
B
1
3
4
5
6
7
8
9
12
13
14
15
16
17
18
19
20

Figure 3

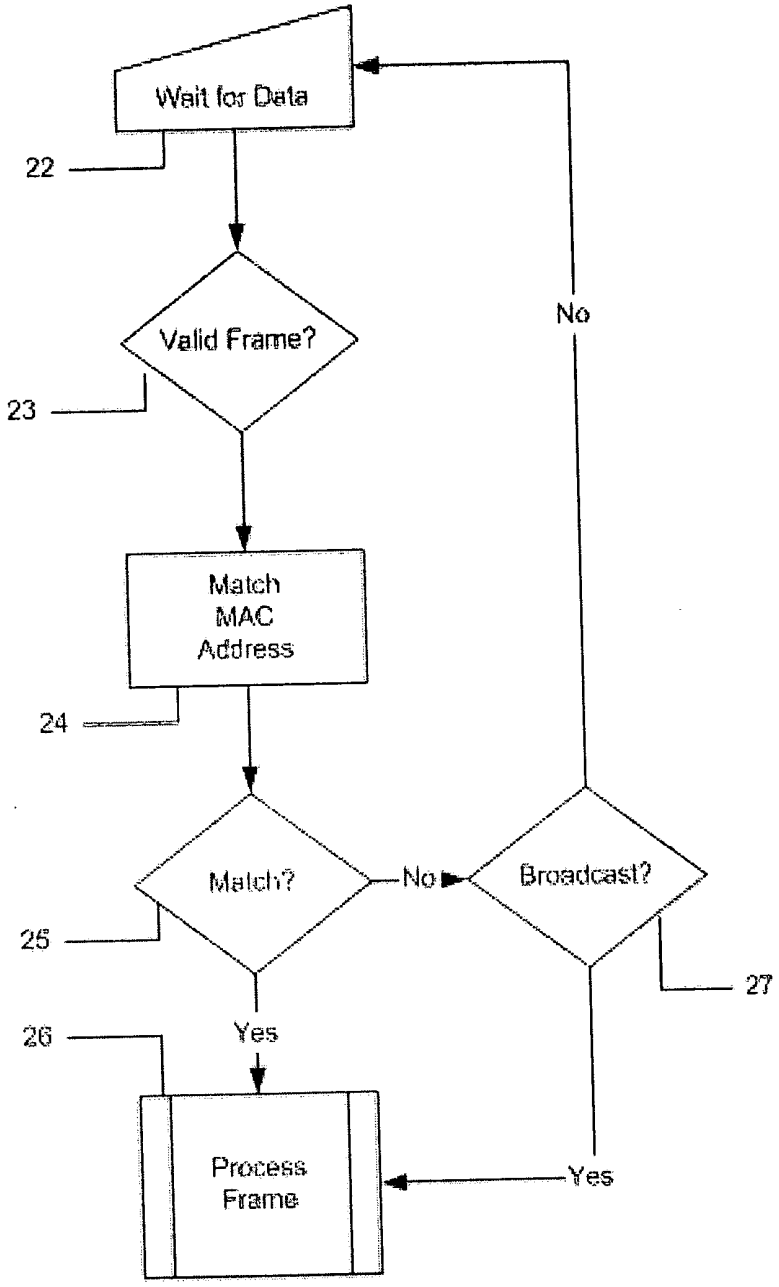
Wait for Data
22
Valid Frame?
23
No
Match
MAC
Address
24
Match?
No
Broadcast?
25
27
Yes
26
Process
Frame
Yes

Figure 4

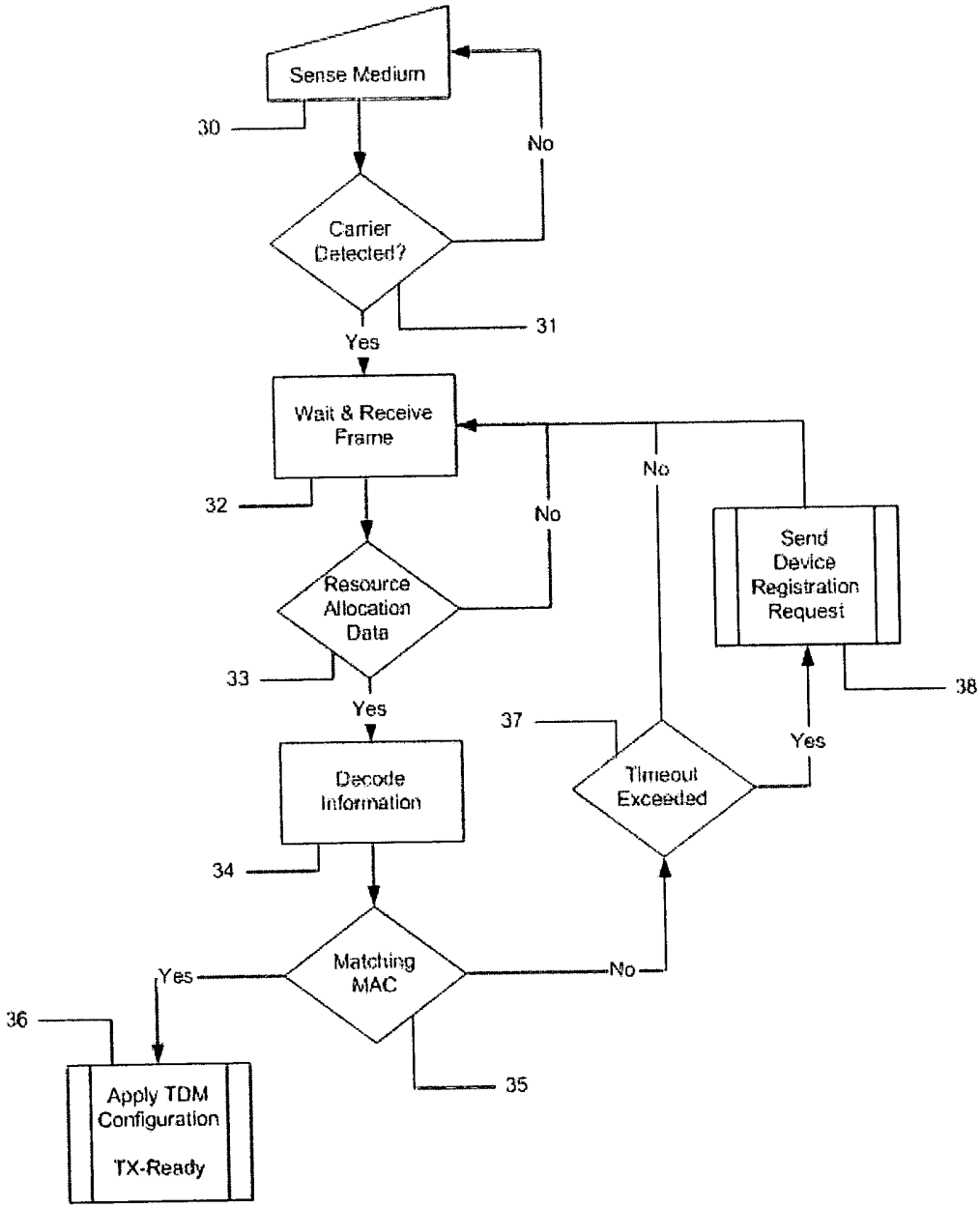
Sense Medium
30
No
Carrier Detected?
31
Yes
Wait & Receive Frame
32
No
Resource Allocation Data
33
Yes
Decode Information
34
Matching MAC
Yes
No
36
35
Apply TDM Configuration
TX-Ready
No
Timeout Exceeded
37
Yes
Send Device Registration Request
38

Figure 5

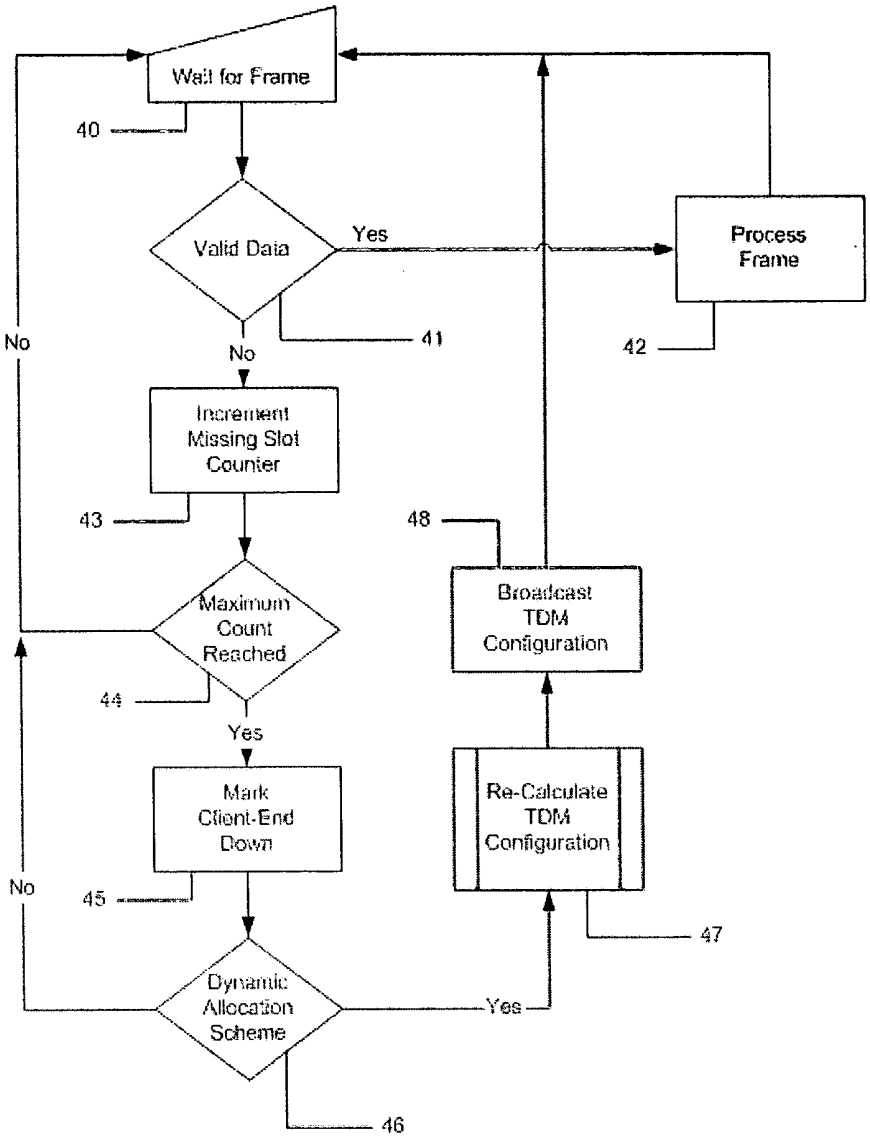
Wait for Frame
40
Valid Data
Yes
Process Frame
42
41
No
No
Increment Missing Slot Counter
43
48
Broadcast TDM Configuration
Maximum Count Reached
44
Yes
Mark Client-End Down
Re-Calculate TDM Configuration
No
45
47
Dynamic Allocation Scheme
Yes
46

Figure 6

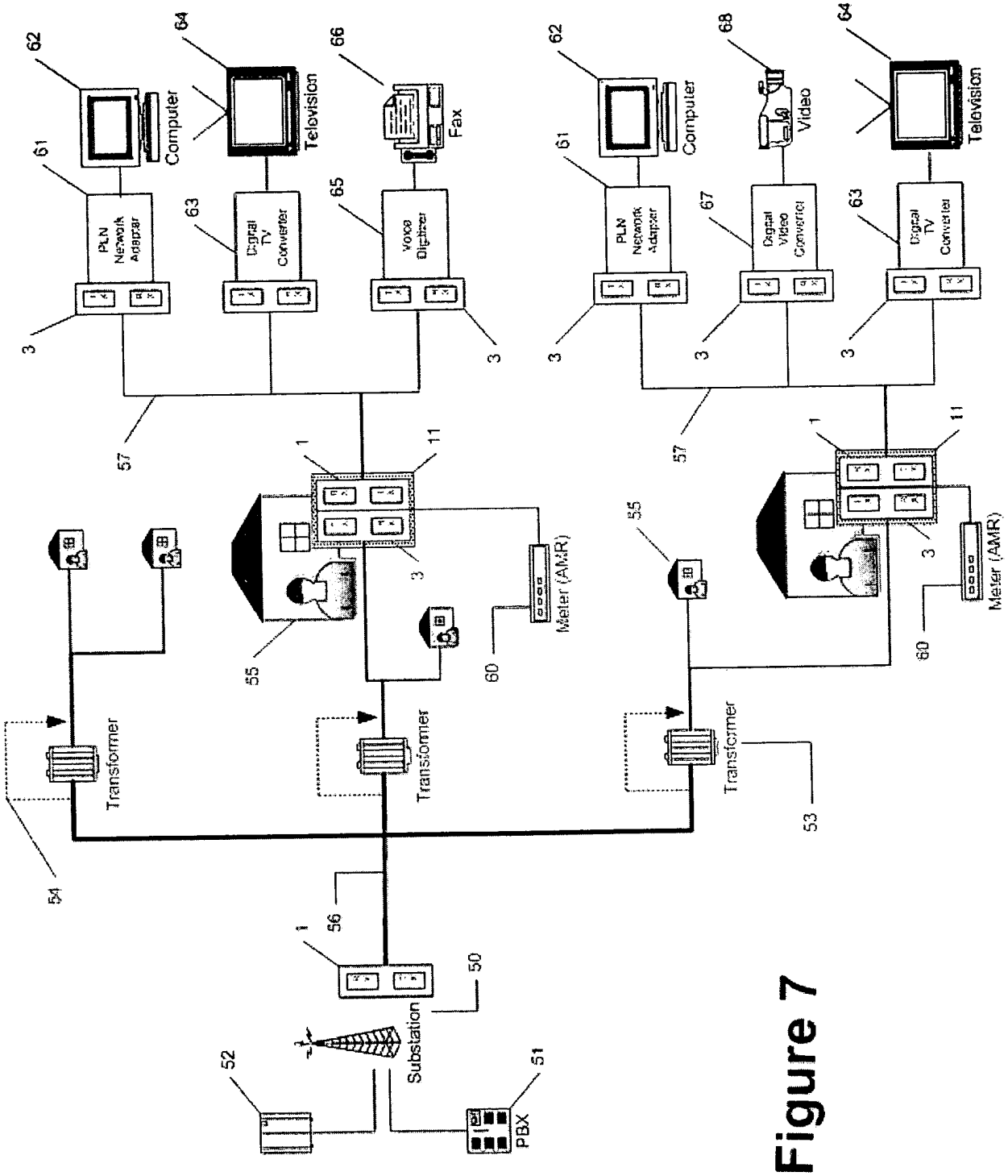
62
Computer
61
PLN Network Adapter
3
64
Television
63
Digital TV Converter
66
Fax
65
Voice Digitizer
57
1
11
55
60
Meter (AMR)
54
Transformer
56
50
Substation
52
51
PBX
68
Video
67
Digital Video Converter
53

Figure 7

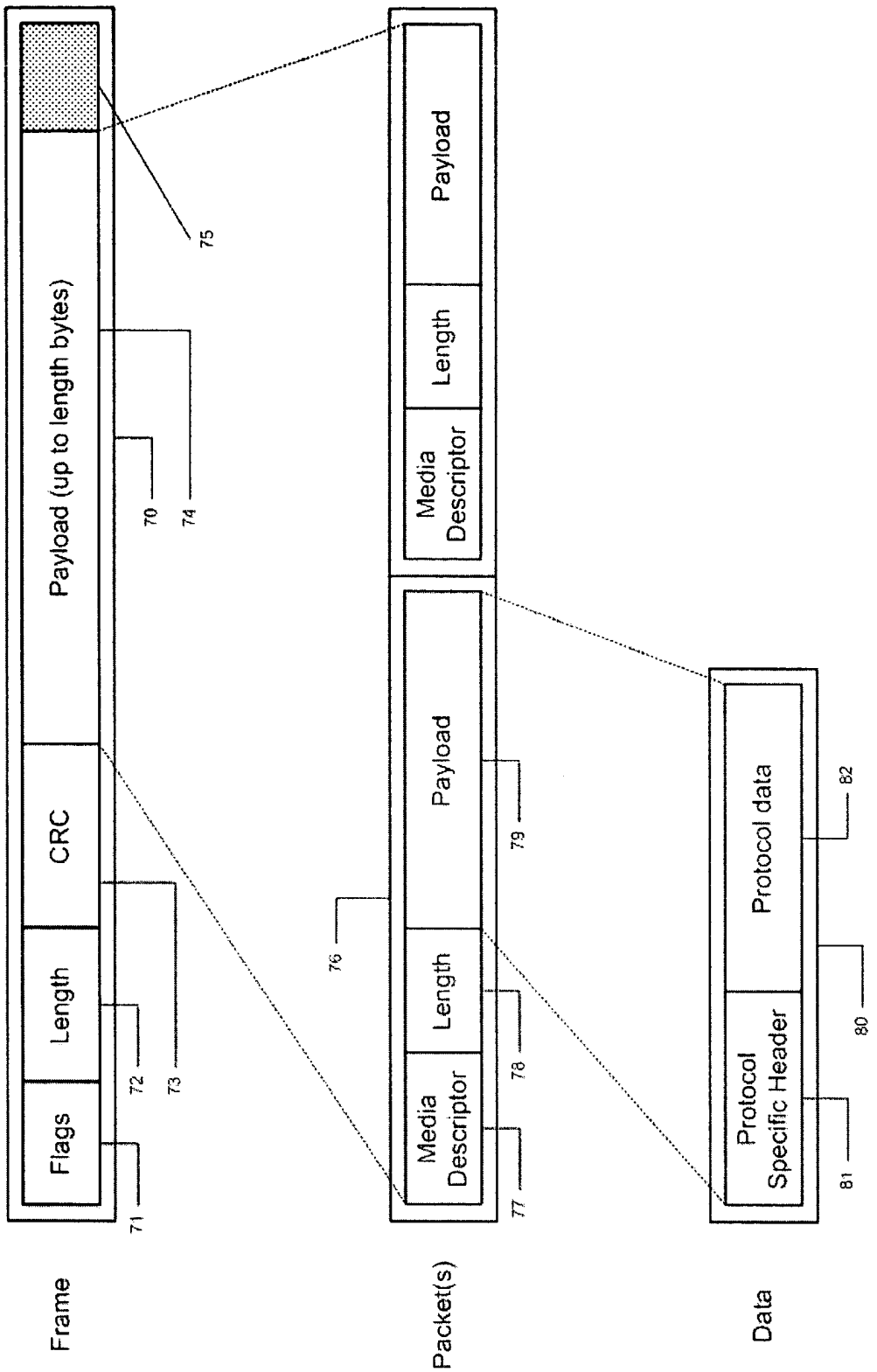
Frame
Flags
Length
CRC
Payload (up to length bytes)
71
72
73
70
74
75
Packet(s)
Media Descriptor
Length
Payload
76
77
78
79
Media Descriptor
Length
Payload
Data
Protocol Specific Header
Protocol data
81
80
82

Figure 8

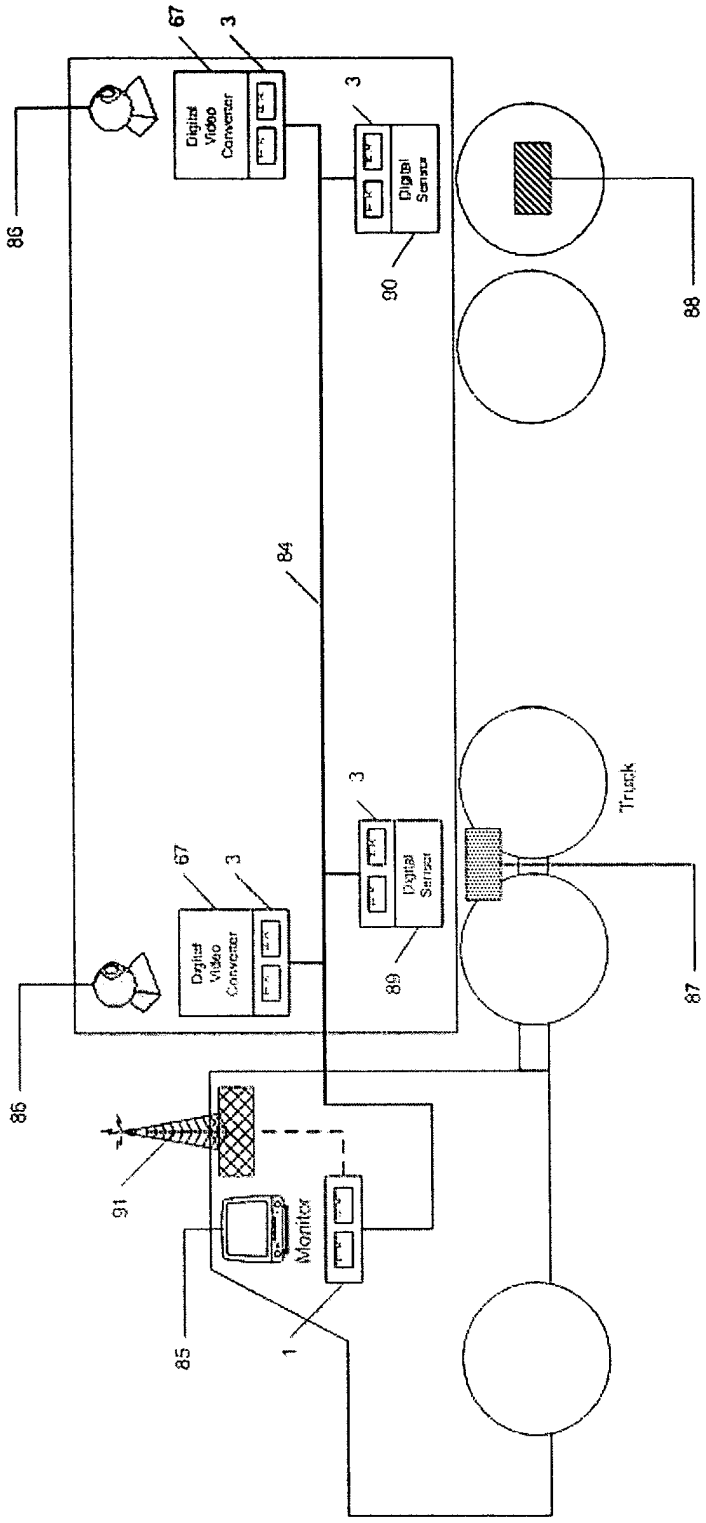
67
3
Digital Video Converter
3
Digital Sensor
86
90
88
84
Truck
67
3
Digital Video Converter
3
Digital Sensor
89
87
86
91
Monitor
85
1

Figure 9